

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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| In the Matter of |) | |
| |) | |
| Amendment of Parts 1, 21, 73, 74 and 101 of the |) | WT Docket No. 03-66 |
| Commission's Rules to Facilitate the Provision of |) | RM-10586 |
| Fixed and Mobile Broadband Access, Educational |) | |
| and Other Advanced Services in the 2150-2162 |) | |
| and 2500-2690 MHz Bands |) | |
| |) | |
| Part 1 of the Commission's Rules – Further |) | WT Docket No. 03-67 |
| Competitive Bidding Procedures |) | |
| |) | |
| Amendment of Parts 21 and 74 to Enable |) | MM Docket No. 97-217 |
| Multipoint Distribution Service and the |) | |
| Instructional Television Fixed Service Amendment |) | |
| of Parts 21 and 74 to Engage in Fixed Two-Way |) | |
| Transmissions |) | |
| |) | |
| Amendment of Parts 21 and 74 of the |) | WT Docket No. 02-68 |
| Commission's Rules with Regard to Licensing in |) | RM-9718 |
| the Multipoint Distribution Service and in the |) | |
| Instructional Television Fixed Service for the |) | |
| Gulf of Mexico |) | |

To: The Commission

REPLY COMMENTS OF FIXED WIRELESS HOLDINGS LLC

Fixed Wireless Holdings LLC ("FWH") submits these reply comments in response to the notice of proposed rulemaking in the above-captioned proceeding.¹

¹ See *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 18 FCC Rcd 6722 (2003) ("*MDS/ITFS NPRM*"). All comments filed in September 2003, in this proceeding will hereinafter be short cited.

I. ALTHOUGH LOW-POWER OPERATIONS REPRESENTS THE BEST USE OF MDS/ITFS SPECTRUM, THE COALITION BAND PLAN OFFERS A WORKABLE COMPROMISE

The record developed in this proceeding demonstrates overwhelming support for a major overhaul of the 2500-2690 MHz band (“MDS/ITFS band”) plan. A diverse array of parties, including multipoint distribution service (“MDS”) and other commercial wireless interests,² instructional television fixed service (“ITFS”) interests,³ equipment manufacturers and technology development companies,⁴ and Internet service providers,⁵ all recognize the need to reconfigure or otherwise modify the MDS/ITFS band plan to accommodate the advent of low-power systems offering new advanced wireless services. The parties, however, disagree over the best approach to modifying the band plan to facilitate low-power operations.

In particular, FWH filed comments objecting to the complexity of the band plan jointly proposed by the Wireless Communications Association International, Inc., the National ITFS Association, and the Catholic Television Network (collectively, the “Coalition”), and supporting an across-the-board reduction in signal strength limits to permit low-power operations

² See, e.g., Comments of FWH at 4-7; Comments of NextNet at 1-5; Comments of BellSouth Corp. at 5-10; Comments of Sprint Corp. at 2-7; Comments of Spectrum Market at 1-3; Comments of IPWireless at 1-3; Comments of NTELOS at 1-3; Comments of Consolidated Telcom *et al.* at 10; Comments of W.A.T.C.H. TV Co. at 1-2; Comments of Grand MMDS Alliance New York Partnership at 2-3; Comments of Ad Hoc MMDS Licensee Consortium at 9-13; Comments of the Independent MMDS Licensee Coalition at 1-4; Comments of Oklahoma Western Telephone Company at 1-3.

³ See, e.g., Comments of Alliance for Higher Education *et al.* at 1-3; Comments of Stanford University and Northeastern University at 2-3; Comments of Illinois Institute of Technology at 1-5; Comments of Education Service Center Region 10 at 2-9; Comments of South Carolina Educational Television Commission at 1-3; Comments of the Archdiocese of New York at cover letter; Comments of the Archdiocese of Los Angeles at 1-3; Comments of the Diocese of Brooklyn at 1-3; Comments the School Board of Miami-Dade County, Fla. at 1-7; Comments of the ITFS/2.5 GHz Mobile Wireless Engineering and Development Alliance at 2-3; Comments of Hispanic Information and Telecommunications Network at 1-6; Comments of Atlanta Interfaith Broadcasters at 1-5.

⁴ See, e.g., Comments of Lucent Technologies at 1-5; Comments of Ericsson Inc. at 3-9; Comments of ArrayCom at 2-4; Comments of Intel Corp. at 4-8; Comments of Motorola at 4-10.

⁵ See, e.g., Comments of EarthLink at 2-4.

throughout the entire MDS/ITFS band.⁶ FWH continues to believe that low-power systems providing digital broadband fixed services represent the most efficient use of the MDS/ITFS spectrum. However, after further discussions with other MDS licensees and in view of the number of MDS and ITFS parties expressing a vested interest in continuing their existing high-power systems, FWH recognizes that the most spectrally and economically efficient approach—mandating a conversion of those systems to low-power operations—may not offer a practical solution to the spectral inefficiencies of the existing band plan. Although the Coalition band plan may not be ideal, FWH is willing to accept the basic construct of the plan as a workable compromise that attempts to accommodate various competing interests, subject to the modifications proposed below.

II. THE COALITION’S PROPOSED TECHNICAL RULES SHOULD BE MODIFIED

FWH urges the Commission to adopt the following two modifications to the Coalition’s proposed technical rules governing low-power operations in the lower band segment (“LBS”) and upper band segment (“UBS”). First, the Commission should specify a maximum equivalent isotropically radiated power (“EIRP”) limit of 500 watts for base stations in the LBS and UBS, rather than the existing limit of 2 kW for MDS base stations.⁷ Second, rather than adopt the Coalition’s proposed signal strength limit of 47 dBμV/m, the Commission should retain the existing signal strength limit of 72.8 dBμV/m⁸ for the LBS and UBS and allow licensees the flexibility to coordinate and agree on alternative signal strength limits at their service area

⁶ See Comments of FWH at 5-6.

⁷ See 47 C.F.R. § 21.904(a).

⁸ 72.8 dBμV/m is equivalent to the power flux density limit of -73 dBW/m² specified in Section 21.902(b)(5)(i) of the Commission’s rules. See 47 C.F.R. § 21.902(b)(5).

boundaries. These proposed technical requirements are better suited to the operation of next-generation low-power systems providing high-speed broadband services.

Specifically, an EIRP limit of 500 watts for low-power base stations will reduce significantly the potential for interference with other co-channel systems and is consistent with the Commission's adoption of reduced power limits for the upper 700 MHz band, which, like the MDS/ITFS band, is allocated for flexible uses.⁹ As the Coalition acknowledged, "a field strength limit alone does not provide adequate interference protection when non-synchronized systems are operating cochannel on opposite sides of the border."¹⁰ A base station EIRP limit of 500 watts will provide additional protection against interference between co-channel systems. It also could minimize the need to apply the Coalition's safe harbor proposal, which can be administratively burdensome. Under the safe harbor proposal, a transmitting base station operator would be required to take appropriate measures to limit the level of the undesired signal at a receiving base station to -107 dBm or less, if the transmitting base station antenna exceeds the safe-harbor height limit and the receiving base station antenna is within the safe-harbor height limit, which varies depending upon the location of the transmitting and receiving base station antennas and their service area boundaries.¹¹ Unlike the Coalition's variable safe-harbor antenna height limit, the base station EIRP limit of 500 watts will provide licensees with a measure of certainty in determining compliance with interference protection requirements.

⁹ See *Service Rules for the 746-764 and 776-794 MHz Bands and revisions to Part 27 of the Commission's Rules*, First Report and Order, 15 FCC Rcd 476, 521-22 ¶ 111 (2000) (adopting power limit of 1 kW for base stations in lower portion of upper 700 MHz band); *Rules for the 746-764 and 776-794 MHz Bands and revisions to Part 27 of the Commission's Rules*, Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 15 FCC Rcd 20845, 20851 ¶ 10 (adopting power limit of 1 kW for base stations throughout upper 700 MHz band).

¹⁰ See Comments of the Coalition at 43.

¹¹ See Coalition's Second Supplement to *A Proposal for Revising the MDS and ITFS Regulatory Regime*, RM-10586, at 3-6 (Feb. 7, 2003).

Furthermore, retaining the existing signal strength limit of 72.8 dB μ V/m for the LBS and UBS will offer licensees needed flexibility to deploy high-speed data services. The Coalition's proposed signal strength limit of 47 dB μ V/m is based on the broadband PCS rules, which are better suited for low bit-rate voice applications. A higher signal strength limit, on the other hand, is necessary to permit licensees to extend reliable, high-speed data services to both outdoor and indoor terminal equipment at the service area boundaries. Because licensees will be required to coordinate their systems at their service area boundaries regardless of whether the signal strength limit is 72.8 dB μ V/m or 47 dB μ V/m, adopting the higher limit of 72.8 dB μ V/m will not unduly increase the risk of interference. At the same time, it will ensure that customers in outlying service areas will be able to enjoy high-speed, digital broadband services.

III. CONCLUSION

Based on the foregoing, FWH generally will support the Coalition band plan, but urges the Commission to adopt reasonably tailored interference protection requirements that facilitate deployment of low-power, high-speed broadband services in the MDS/ITFS band.

Respectfully submitted,

FIXED WIRELESS HOLDINGS LLC

/s/ Cheryl A. Tritt

Cheryl A. Tritt

Phuong N. Pham

MORRISON & FOERSTER LLP

2000 Pennsylvania Avenue, NW - Suite 5500

Washington, D.C. 20006

October 23, 2003

Its Counsel

CERTIFICATE OF SERVICE

I, Theresa L. Rollins, hereby certify that a copy of the foregoing **REPLY COMMENTS** has been served this 23rd day of October 2003 via electronic mail on the following:

Bryan Tramont
Senior Legal Advisor
Office of Chairman Michael K. Powell
Federal Communications Commission
445 12th Street, SW, Room 8-B115E
Washington, DC 20554
E-mail: btramont@fcc.gov

Samuel L. Feder
Spectrum and International Legal Advisor
Office of Commissioner Kevin Martin
Federal Communications Commission
445 12th Street, SW, Room 8-A204
Washington, DC 20554
E-mail: sfeder@fcc.gov

Barry Ohlson
Spectrum and International Legal Advisor
Office of Commissioner Jonathan Adelstein
Federal Communications Commission
445 12th Street, SW, 8th Floor
Washington, DC 20554
E-mail: bohlon@fcc.gov

John Schauble
Public Safety and Private Wireless Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554
E-Mail: jschauble@fcc.gov

Stephen Zak
Public Safety and Private Wireless Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C124
Washington, DC 20554
E-Mail: szak@fcc.gov

Paul Margie
Spectrum and International Legal Advisor
Office of Commissioner Michael Copps
Federal Communications Commission
445 12th Street, SW, Room 8-A302
Washington, DC 20554
E-mail: pmargie@fcc.gov

Jennifer Manner
Senior Counsel
Office of Commissioner Kathleen Abernathy
Federal Communications Commission
445 12th Street, SW, Room 4-A161
Washington, DC 20554
E-mail: jmanner@fcc.gov

D'Wana Terry
Public Safety and Private Wireless Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554
E-Mail: dterry@fcc.gov

Charles Oliver
Public Safety and Private Wireless Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C124
Washington, DC 20554
E-Mail: coliver@fcc.gov

Nancy Zaczek
Public Safety and Private Wireless Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C124
Washington, DC 20554
E-Mail: nzaczek@fcc.gov

Gary Michaels
Auctions and Industry Analysis Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 4-A760
Washington, DC 20554
E-Mail: gmichael@fcc.gov

Andrea Kelly
Auctions and Industry Analysis Div.
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 4-A760
Washington, DC 20554
E-Mail: akelly@fcc.gov

Catherine Seidel
Office of the Bureau Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554
E-Mail: cseidel@fcc.gov

Qualex International
Portals II
445 12th Street, SW
Courtyard Level
Washington, DC 20554
E-Mail: qualexint@aol.com

/s/ Theresa L. Rollins
Theresa L. Rollins